

ABSTRACT OF THE DISCLOSURE

A semiconductor manufacturing apparatus includes a unit for generating a plasma in a vacuum chamber, a wafer stage for holding a semiconductor wafer introduced into the vacuum chamber, a high frequency power supply for applying a high frequency voltage to the wafer stage, a wafer voltage probe for measuring a voltage of the semiconductor wafer at a rear surface of the semiconductor wafer, a current and voltage probe for measuring at least one of a voltage and a current applied to the wafer stage from the high frequency power supply, and a control portion. The control portion obtains an impedance from the semiconductor wafer to earth through the plasma on the basis of a voltage value of the semiconductor wafer measured by the wafer voltage probe, and a voltage value or a current value measured by the current and voltage probe, and performs a processing based on the obtained impedance.